

AperTO - Archivio Istituzionale Open Access dell'Università di Torino

Comparative effectiveness of dimethyl fumarate, teriflunomide, interferon-beta and glatiramer acetate on newly diagnosed patients: a propensity score-matched analysis from a multicenter Italian group

This is a pre print version of the following article:

Original Citation:

Availability:

This version is available <http://hdl.handle.net/2318/1757515> since 2020-10-02T10:38:14Z

Publisher:

SAGE PUBLICATIONS LTD

Terms of use:

Open Access

Anyone can freely access the full text of works made available as "Open Access". Works made available under a Creative Commons license can be used according to the terms and conditions of said license. Use of all other works requires consent of the right holder (author or publisher) if not exempted from copyright protection by the applicable law.

(Article begins on next page)

Abstract: P1891

Type: Poster

Abstract Category: Late breaking news

Objective: To compare effectiveness of dimethyl fumarate (DMF) and teriflunomide (TERI) vs injectables first-line therapies as interferon-beta (IFN) and glatiramer acetate (GA) on time to first relapse (TTFR) in newly diagnosed patients.

Background: New MS oral drugs as DMF and TERI have been recently approved as first line therapies for RRMS. Real-life comparisons between these drugs and injectable first line therapies, aimed to assess the relative effectiveness, are becoming possible as new data accumulate.

Methods: This analysis included only newly diagnosed RRMS patients (2010-2016) followed in 24 Italian centres and is focused on their first treatment. Patients who received TERI, DMF, IFN or GA as their first therapy were included. Propensity score (PS) matching (1:1) was used to match patients treated with DMF and TERI to comparable patients treated with IFN and GA. As a control, a matched comparison was also run between IFN and GA. PS matching was based on baseline characteristics as age, year and EDSS at diagnosis, gender, disease duration since first symptom, treatment delay, relapse rate in previous year, active and spinal cord MRI lesions. TTFR was analysed using a Kaplan-Meier approach and a stratified Cox model accounting for PS matched pairs.

Results: The database included 3033 newly diagnosed patients; of these 1525 received IFN, 543 GA, 313 DMF and 108 TERI as their first therapy. The remaining 544 received other drugs. Among patients on DMF, it was possible to find 221 and 191 matched pairs of patients treated with IFN and GA. Patients treated with DMF had a lower risk of relapse as compared to patients on IFN (HR=0.58; 95% CI:0.37-0.93; p=0.025) while the difference was not significant with patients on GA (HR = 0.77; 95% CI: 0.40-1.51; p=0.45). Among patients on TERI, 82 were matched to patients on IFN and 96 to patients on GA. No significant difference on TTFR was observed between TERI and IFN (HR=0.75; 95% CI:0.35-1.60; p=0.46) nor between TERI and GA (HR=0.82; 95% CI: 0.38-1.77; p=0.61). No difference was observed between IFN and GA (HR = 0.90; 95% CI: 0.69-1.17; p=0.42).

Conclusions: In newly diagnosed patients, DMF showed a significant delay in TTFR as compared to IFN. Larger cohort of patients in DMF and TERI are needed to confirm these results and reach the power to detect smaller differences between oral and injectable drugs in the capacity of oral drugs to delay relapse appearance in RRMS naïve patients at their first therapy.

Disclosure:

Alessio Signori received teaching honoraria from Novartis.

Maria Pia Sormani received personal compensation for consulting services and for speaking activities from Merck Serono, Teva, Novartis, Roche, Genzyme and Biogen.

Giorgia T. Maniscalco received personal compensation from Serono, Biogen and TEVA for public speaking and advisory boards.

Elisabetta Signoriello received personal compensation from Almirall, Biogen, Genzyme, Novartis and Teva for traveling and advisory boards.

Silvia Rossi acted as an Advisory Board member of Biogen Idec, Bayer Schering, Merck Serono, Teva, Novartis and Genzyme, and received funding for traveling and honoraria for speaking or writing from Biogen Idec, Merck Serono, Teva, Novartis, Bayer Schering, Genzyme, Almirall. She received support for research project by Teva, Merck Serono and Bayer Schering and is involved as principal investigator in clinical trials for Teva and Roche.

Lorena Pareja Gutierrez has nothing to disclose

Francesco Saccà received personal compensation from Novartis, Almirall, Genzyme, Biogen, Forward Pharma and TEVA for public speaking, editorial work and advisory boards.

Cinzia Valeria Russo has nothing to disclose.

Salvatore Lo Fermo received funding for travel and for advisory board from Genzyme, Biogen Idec, Teva, Merck-Serono.

Annamaria Repice received personal compensation from Biogen Idec, Genzyme, Novartis and Merck Serono for public speaking and advisory boards

Damiano Baroncini received honoraria from Almirall for the creation of editorial publications, and travel grants for participation to international congresses from Genzyme and TEVA.

Pietro Annovazzi served as advisor and received speaking honoraria from Novartis, Merck Serono, Genzyme, Biogen and Teva Italia.

Marinella Clerico received personal compensation for participating to advisory boards by Merck Serono and Biogen; travel expenses for congresses paid by Merck, Biogen, Novartis and Genzyme.

Raffaella Cerqua received funding for travel and/or speaker honoraria from Genzyme, Biogen Idec, Teva, Merck-Serono, and Novartis.

Eleonora Binello has nothing to disclose.

Giorgia Mataluni

Jessica Frau serves on scientific advisory boards for Biogen, received honoraria for speaking from Merck Serono, Biogen and Teva and received a research grant from Merck Serono.

Eleonora Cocco received personal compensation from Almirall, Bayer, Biogen, Genzyme, Novartis, Serono and TEVA for public speaking, editorial work and advisory boards.

Ignazio Roberto Zarbo has served on a scientific advisory board for Biogen Idec, and received funding for travel and/or speaker honoraria from Genzyme, Biogen Idec, Teva, Merck and Novartis.

Alice Laroni has received personal compensation from Novartis, Genzyme, Biogen and TEVA for public speaking and advisory boards.

Arianna Sartori has received funding for travel and/or speaker honoraria from Novartis, Teva, Merck-Serono and Genzyme.

Cinzia Cordioli received personal compensations for consultanting from MerckSerono and Novartis. **Sarah Rasia** has nothing to disclose.

Simona Bonavita received speaker honoraria from Merck Serono, Novartis, Teva and Genzyme; Advisory Board honoraria from Teva, Novartis, Biogen.

Luigi Lavorgna received funding for travel and/or speaker honoraria from Novartis, Genzyme, Teva, Merck, Almirall and Bayer.

Sabrina Esposito has nothing to disclose.

Valentina Torri Clerici received personal compensation from Novartis, Almirall, Genzyme, and Teva for public speaking, editorial work and advisory boards.

Sara La Gioia has nothing to disclose.

Barbara Frigeni has nothing to disclose.

Valeria Barcella has nothing to disclose.

Simona Pontecorvo received personal compensation from Almirall, Biogen, Genzyme, and Teva for public speaking and advisory boards.

Alessia Di Sapio received personal compensation from Novartis, Biogen, Merck Serono, Teva and Bayer Schering for public speaking and advisory boards; received funding for travel/meetings from Merck Serono, Biogen, Novartis, Genzyme, Allergan and Medtronic.

Roberta Grasso has nothing to disclose.

Maria Laura Stromillo has nothing to disclose.

Caterina Barrilà has nothing to disclose.

Fabio Gallo received teaching fees from Novartis.

Roberta Lanzillo received personal compensation from Merck Serono, Biogen, Novartis, Almirall, Genzyme, and TEVA for public speaking, editorial work and advisory boards.